W5YI

National Volunteer Examiner Coordinator

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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★ *In This Issue* ★

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Senate agrees not to charge ham license fees

During late summer, the Congress decided that so-called *"cost of regulation"* fees should be charged those who avail themselves to FCC licensing. The fees detailed in the *Omnibus Budget Reconciliation Act of 1989* applied to applications for licensing or paperwork processing in most radio services -- ham radio included. The $42 million generated by the fees would not go to the Commission directly, but to the Treasury to help reduce the massive federal deficit.

Both the House and the Senate were in agreement that fees should be levied whenever the FCC issued an amateur license - whether it be a new, modified, renewal or alien reciprocal ticket. All classes of license were included - including club, RACES and military recreation stations. The only disagreement appeared to be how much should be charged. The House version suggested $30, the Senate went with $35. Their thinking was that since an amateur license carried a ten year term, $3.00 or $3.50 a year was not very much for the privileges afforded.

The Amateur Radio Service is currently exempt from FCC fees because of its noncommercial, public-service nature. GMRS users, many of whom also engage in public service communications, have been paying $30 for some time. GMRS is the old Class A CB General Mobile Radio Service -- regular CB is not affected since the Commission no longer issues citizen's band licenses.

Amateur volunteer examiners were concerned about the fees. Land mobile (business band) coordinators handle applicant's regulatory fee payments for commercial radio licenses. It began to appear that VE's would be collecting the "cost of regulation" fee for the government since all applications for new and upgraded licenses now pass through volunteer examiners before forwarding to the FCC.

In addressing the Senate on October 3rd, Senator Carl Levin of Michigan objected to the license fees on amateur radio operators. He maintained that hams are dedicated individuals who work long hours in public safety, disaster relief and emergency communications. Levin pointed out that the Senate Commerce Committee did not include other non-profit organizations in the fee schedule because of their public service. He called the fees on ham operators "...unfair." The House passed the deficit reduction bill on October 5th with ham license fees intact and the Senate began its deliberation.

Our primary objection to the licensing fees was not in the $3.00 or $3.50 a year ...but the nearly $200.00 an applicant would have to pay who was making his way up through the amateur ranks. ($30-$35 for a Novice ticket, then, considering the test and modification fee, another 35-40 bucks every time an amateur upgraded his license.)

We have many examinees who are administered and pass examinations on a monthly ...even a weekly basis. We felt the modification fee would have a devastating impact on the self-education aspect of the amateur service.

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We drafted a letter to Tom Cohen, Senior Counsel of the *Senate Committee on Commerce, Science and Transportation, Subcommittee on Communications.* We explained amateur service incentive licensing and the volunteer examiner program to Cohen. "To require a modification fee every time an applicant upgrades their status will cause untold thousands of examinees not to upgrade - or improve their knowledge of electronics and communciations. We feel this will have a chilling effect on the value of amateur radio as a high technology educational tool - and our efforts to guide our nation's youth toward an engineering career," I said.

"At present, successful examinees are given a new ten year term every time they improve (upgrade) their operator license. I propose that a new ten year term not be given every time an applicant upgrades. Instead, the license should retain the original expiration date - i.e. ten years from the date of (new or renewed) fee <u>payment</u>. This would permit implementation of a license fee in the Amateur Service which the Congress apparently feels important - yet not have the effect of precluding our youth from improving their electronic knowledge."

I explained that Japan has four times as many engineers per capita as the United States. They also have the most amateur operators of any nation in the world ...the majority are under twenty years old. "We believe there is a direct relationship."

"We feel it vital to our nation that the Congress not enact a fee on amateur license modifications which would dull enthusiasm. The amateur service is an excellent tool with which to educate our youth. We hams call it incentive licensing - more privileges, transmitter power and frequencies in exchange for more proficiency and knowledge. Let's not do anything that will inhibit the marvelous self-education aspect of the amateur service." We mailed the letter on October 16th.

This past week we received a reply from Ernest F. Hollings of South Carolina. Senator Hollings is Chairman of the Committee on Commerce, Science and Transportation. It reads:

"Thank you for your recent letter concerning the proposed fees on amateur radio (ham) operators. I agree that hams often provide valuable public service in times of emergency and that many school children become introduced to science and engineering through their introduction to ham radio. Recognizing this, I have spoken with Senator Levin and have agreed to work with him to strike these fees from the current legislation. With kindest regards, I am, Sincerely Ernest F., Hollings, Chairman."

HEARING HELD ON SPECTRUM TRANSFER
...<u>from government to FCC jurisdiction</u>

The measure had not yet been dropped in the hopper when we first reported last July on the *Emerging Telecommunications Technologies Act of 1989* (ETTA). HR 2965 proposes to reallocate some 200 MHz - more or less - of spectrum from the Government arsenal to private commercial use. If vast amounts of new spectrum are made available to new business users, the result could be less pressure to reallocate amateur frequencies.

The House Telecommunications Subcommittee held a hearing on the bill last week. It marked the first time in thirty years that Congress has held hearings on spectrum allocation matters. They generally leave such matters up to the FCC and NTIA.

The NTIA, *National Telecommunciations and Information Administration,* is the White House adviser on communications matters. Headed up by a woman whose name sounds like a sneeze, NTIA oversees the use of federal government spectrum while the FCC is in charge of private and commercial allocations. As a general rule, each rules their own territory. Congress, of course, has the power to get involved in both areas and that is exactly what they are doing.

The bill introduced by powerful House Energy and Commerce Committee Chiarman John Dingell (D-Mich.) orders Commerce to designate some 200 megahertz of underutilized government spectrum for new commercial applications ...such as high definition television, viewer to TV studio links, pocket cordless telephones and what not. While new technological efficiencies have yielded more frequencies, the FCC is fast running out of ideas on how to accomodate the host of new spectrum-based gadgets and proposals. ETTA now has some 14 cosponsors. It is a very hot property indeed.

Dingell, realizing that the FCC has no more spectrum available to give out, is looking to government allocations. It seems they have plenty. Reportedly some 40 percent of their allotment go unused by anyone. He said the goverment was holding back

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER? [illegible] your Extra Class license, the following signed statement, and a "I am a currently licensed Extra Class amateur radio operator and [illegible] operator license revoked or suspended., I do not own a significant [illegible]

economic innovation and progress by retaining their frequencies at a time of increasing foreign competition. He mentioned Great Britain and Japan.

Al Sikes, the current FCC chairman, used to head up the NTIA before migrating to the public sector. Like good soldiers, both he and NTIA's Obuchowski are backing the Bush Administration's position that any identified spectrum should be sold to the highest bidder to help reduce the federal deficit instead of giving it away. The Bush administration previously endorsed the concept of spectrum auctioning when it released the federal budget in January.

Like oil, the radio spectrum is a limited, natural, consumable and very valuable resource. Two hundred megahertz would be worth billions! Both FCC and NTIA oppose a provision in HR 2965 that would bar auctioning of the spectrum. Sikes did say, however, he was not reluctant to take a position independent of the administration.

NTIA maintains that government spectrum is also congested and any reallocation to the private sector would be costly because the government would then have to invest in new efficiencies too. They would prefer government/non-government sharing rather than an outright transfer of spectrum. NTIA is in the process of studying government spectrum use and management. The study will take one year to complete. Prime users are the Departments of Defense, State and Justice.

House Telecommunications Chairman, Edward J. Markey (D-Mass., a co-sponsor) said that the first hearing reinforced his view of the bill's importance and he is scheduling another hearing to obtain testimony from the private sector ...and from local, state and federal users. He said the bill had been "put on the fast track."

ARRL RECEIVES DEVELOPMENT GRANT

On October 3, the American Radio Relay League (ARRL) received a $10,000 grant from the *Federal Emergency Management Agency* (FEMA) for high-frequency packet radio modem and protocol development over the next two years. The ARRL will use the grant to fund out-of-pocket costs (excluding labor or overhead) for volunteer participants in the development program.

Packet radio is an automated method of transmitting computer data in short bursts. Approximately 100,000 packet radio units have been built by, or sold to, Amateur Radio operators throughout the world. Government agencies and commercial companies use low-cost packet radio equipment and protocols developed by radio amateurs. FEMA has a special interest in effective communications between FEMA representatives and amateur operators at the onset of natural disasters. Existing packet radio hardware and software operate effectively at very-high frequencies (above 30 MHz), however reception of packets is often poor because of fading and interference. The purpose of the FEMA grant is to encourage development of techniques to improve the reliability of hf packet radio reception.

The ARRL has identified several areas for research to improve reliability and reduce retransmissions: modems, protocols, diversity reception and network management techniques. Designers or design teams wishing to participate in this program are invited to contact Lori Weinberg, ARRL, 225 Main St., Newington, CT 06111, Tel: 203-666-1541.

TAPR'S PACKETRADIO PROJECT

The *Tucson Amateur Packet Radio Corporation* (TAPR) has reported on the status of their exciting *packetRADIO* project. *PacketRADIO* is a 2-meter 4-channel crystal-controlled transceiver specifically designed for high-speed (9600 baud) packet data operation. The *packetRADIO* is intended for end-user network access (i.e. the average ham). Its impact on packet communications could be substantial. Not only can much of the congestion and delays on packet links be reduced with this radio ...but asynchromous conferencing, graphics, digital voice packet and other useful applications, formerly hindered by slow 1200 baud speed, could become a reality. The unit connects to ordinary TNCs.

TAPR will only produce 100 radios for beta testing, available after the first of the year. After testing, the radio will be available from TAPR as a kit and in assembled form from ham manufacturers. The unt features 1 millisecond TX/RX turnaround time thanks to pin diode switching and an offset transmitter oscillator. Compare this to the typical 150-400 ms time of commercial voice radios. The fast turnaround enables the modem to operate as close to 9600 bps as possible. Digital signal processing is used to generate the filtered FSK signal for the 9600 bps modem. 1200 bps operation will be included also. (TAPR, POB 12925, Tucson AZ 85732 Tel: 602/323-1710)

The FCC keeps exhaustive statistics on the status of all of its licensees - including those of the Amateur Service. We thought you would be interested in some of the figures from the 1989 Fiscal Year. Keep in mind that the government operates on an October 1 to September 30 fiscal year ..thus the 1989 figures are for the 12 months ending 9/30/89.

Amateurs entering service for the first time.

(Fiscal Year)	*FY*	*FY*	*FY*
First Licenses to:	***1987***	***1988***	***1989***
Novice	22319	18550	20047
Technician	1452	2117	2498
General	411	307	355
Advanced	119	82	126
Extra Class	37	24	39
Total Licenses:	***24338***	***21080***	***23065***

"New blood" entering the Amateur Service is really the only true measure of ham radio growth, The number of newcomers has pretty much stagnated as evidenced by these figures. "Novice Enhancement" has not helped increase the Amateur ranks.

Existing amateurs upgrading their licenses

(Fiscal Year)	*FY*	*FY*	*FY*
Hams Upgrading:	***1987***	***1988***	***1989***
Novice to:			
Technician	11168	13050	14024
General	2035	1317	1054
Advanced	133	132	106
Extra Class	29	26	14
Subtotal:	***13365***	***14525***	***15198***
Technician to:			
General	2926	3780	4070
Advanced	730	938	921
Extra Class	31	62	26
Subtotal:	***3687***	***4780***	***5017***
General to:			
Advanced	3777	3750	3640
Extra Class	230	269	195
Subtotal:	***4007***	***4019***	***3835***
Advanced to:			
Extra Class	***2755***	***3018***	***2739***
Total Upgrades:	***23814***	***26342***	***26789***

The trend here is clear. Ascending to the Technician Class is by far the most popular upgrade. There is little growth in upgrading to the senior level (Advanced and Extra) classes. Most newcomers appear satisfied to operate on the VHF/UHF bands.

Amateurs by License Class, Five Year Period

FY:	*Extra:*	*Adv:*	*Gen:*	*Tech.:*	*Nov:*	*Total*
85	37968	97825	117340	83117	76337	**412587**
%	9.2%	23.7%	28.5%	20.1%	18.5%	100.0%
86	40768	98195	116864	86148	79107	**421082**
%	9.7%	23.3%	27.8%	20.4%	18.8%	100.0%
87	43214	98147	114428	91633	82779	**430201**
%	10.1%	22.8%	26.6%	21.3%	19.2%	100.0%
88	46152	98354	112989	99603	79667	**436828**
%	10.5%	22.5%	25.9%	22.8%	18.3%	100.0%
89	49545	101514	116496	112631	84614	**464800**
%	10.7%	21.8%	25.1%	24.2%	18.2%	100.0%

The Extra Class ...and especially the Technician Class shows the greatest increase. All other classes are declining in their portion of total amateur population. The figures for 1989 are somewhat distorted due to implementation of the ten year term license 1984. There are 35% more Technician Class amateurs than just five years ago! 1990 will see the Technician Class easily overtake the General Class as the most widely held ham ticket.

Ham Census - Ten Most Populated States

	FY 1985:	*FY 1986:*	*FY 1987:*	*FY 1988:*	*FY 1989:*
CA	59,960	58,400	59,944	61,432	66,130
FL	24,518	25,476	26,242	27,094	28,856
TX	24,408	24,930	25,495	25,992	27,750
NY	25,833	26,030	26,001	25,505	26,878
OH	20,276	20,370	20,783	21,010	22,179
PA	17,153	17,309	17,525	17,531	18,439
IL	17,384	17,446	17,548	17,509	18,286
MI	14,212	14,158	14,258	14,258	15,052
WA	12,600	12,997	13,436	14,016	15,034
NJ	12,824	12,910	12,932	12,823	13,482

Observation: California, Florida and Texas continue to post significant gains while other heavily populated states show basically no growth. Ham radio is a prime hobby of retirees and one explanation may be the influence of their migration to warmer climates. It is interesting to note that these ten states account for more than half of all FCC licensed amateurs.

The ten states with the fewest amateur operators are: Wyoming 1,019, Delaware 1,097, South Dakota 1,165, North Dakota 1,149, Vermont 1,269, Montana 1,764, Rhode Island 1,833, Alaska 2,091, Idaho 2,205 and Nevada 2,300.

VEC System Statistics - Fiscal Year Basis

Fiscal Year:	Test Sessions	Elem. Admin.	Persons Examined	Upgrade Percent	Persons /Session
1985	2,644	55,981	36,937	55.2%	14.6
1986	3,733	62,065	42,528	59.4%	11.4
1987	4,252	75,184	47,676	59.6%	11.2
1988	4,739	88,949	52,836	60.6%	11.1
1989	5,342	93,744	55,863	60.7%	10.5

The VEC System which examines applicants for Technician and higher class licenses continues to expand. There are now more than twice as many test sessions as there were five years ago. The passing rate continues to increase slightly - about 60% of those taking examinations successfully upgrade. The number of applicants attending each session has declined somewhat.

Amateur Census by State, End 1989 Fiscal Year:

State	EXT.	ADV.	GEN.	TECH.	NOV.	TOTAL:
AL	748	1440	1576	1769	986	6519
AK	247	488	575	418	363	2091
AZ	961	2077	2224	2364	1159	8785
AR	395	827	915	918	562	3617
CA	6247	14588	15275	17954	12066	66130
CO	893	1758	1969	1771	1162	7553
CT	848	1459	1831	1325	1483	6946
DE	148	227	257	272	193	1097
DC	72	103	126	62	77	440
FL	2821	6518	7691	6349	5477	28856
GA	1024	2112	2267	2366	1338	9107
HI	248	479	553	549	580	2409
ID	223	462	641	508	371	2205
IL	1958	3850	4658	4473	3347	18286
IN	1043	2182	2587	2903	1975	10690
IA	543	1320	1453	1021	963	5300
KS	535	1035	1450	1009	978	5007
KY	525	1010	1264	1328	1051	5178
LA	589	1247	1330	1187	829	5182
ME	318	579	897	505	499	2798
MD	1130	2109	2066	1777	1400	8482
MA	1489	2538	3184	2787	1937	11935
MI	1598	3277	4004	3517	2656	15052
MN	847	1791	2153	1518	1258	7567
MS	307	677	786	710	486	2966
MO	962	1954	2399	1894	1458	8667
MT	210	376	535	302	341	1764
NE	275	726	964	590	486	3041
NV	252	486	659	572	331	2300
NH	457	652	851	741	528	3229
NJ	1691	3050	3272	3156	2313	13482
NM	428	778	784	700	362	3052
NY	2826	5458	6481	5928	6185	26878
NC	1061	2384	2612	2427	1600	10084
ND	109	227	358	213	258	1165
OH	2208	4494	5165	6286	4026	22179
OK	590	1340	1336	1515	1014	5795
OR	829	1803	2274	1973	1499	8378
PA	2076	4012	4741	4174	3436	18439
RI	207	318	501	466	341	1833
SC	450	932	1184	999	603	4168
SD	122	302	347	211	167	1149
TN	912	1991	1949	2459	1376	8687
TX	3216	6420	6904	7028	4182	27750
UT	320	662	608	1046	660	3296
VT	163	267	376	259	204	1269
VA	1395	2610	2790	2323	1787	10905
WA	1559	3137	3874	3593	2871	15034
WI	771	1626	2074	1498	1242	7211
WY	122	187	257	228	225	1019
GU	22	42	35	47	170	316
PR	190	459	565	1758	2812	5784
VI	27	44	55	54	46	226
AS	2	3	10	1	9	25
JI	1	1	0	0	0	2
NMI	7	6	8	0	4	25
Other	1	2	1	0	6	10
	49545	*101514*	*116496*	*112631*	*84614*	***464800***

(GU=Guam, PR=Puerto Rico, VI=Virgin Isl.,AS= Am. Samoa, JI-Johnston Isl., NMI-N.Mariana Isl.)	Club Stations	2066
	Military Recreation	144
	RACES Stations	295
	Total Stations....	***467305***

Active Amateurs Sorted by Call Sign Group:

GP:	EXT.	ADV.	GEN.	TECH.	NOV.	TOTAL:
A	29508	695	248	8		30459
B	2129	23818	54	7	2	26010
C	11464	41414	62551	45902	56	161387
D	6203	35464	53537	66649	84553	246406
Other	241	123	106	65	3	538
Tot.:	49545	101514	116496	112631	84614	**464800**

Group A Call signs = K, N, W x2; AA-AKx1, KA-KZx1, NA-NZx1, WA-WZx1 & AAx2-AKx2
Group B Call Signs = KA0-KA1x2, KB-KZx2, NA-NZx2,WA-WZx2
Group C Call Signs = Kx3, Nx3, Wx3
Group D Call Signs = KA-KZx3, WA-WZx3
(Stations outside the contiguous U.S. have different call sign formats.)

Amateurs Changing License Class & Call Sign

Changed:	Class	Call Sign	
1987	23,814	10,589	44.5%
1988	26,342	11,769	44.7%
1989	26,789	12,471	46.6%

Renewals versus Purged (Dropped) Amateurs

	Renewed	Drop Outs
1987	39364	15480
1988	39404	13277
1989	8222*	16523

*Due to 10 year term, no renewals from 1989-1994

■ **Gordon Girton, W6NLG,** who heads up the Sunnyvale VEC testing program filed a *Petition for Rulemaking* entitled **"Technician Enhancement"** on November 4. Girton suggests the following changes be made to the Amateur Service Part 97 Rules:
(1.) Remove the prosigns AR, BT and SK from all telegraphy examinations.
(2.) Lower the code speed requirement for the General Class operator from 13 wpm (Element 1B) to the 5 wpm speed required for the Novice license (Element 1A.)
(3.) Administering and preparing VE's must hold a current FCC-issued Amateur Extra or Advanced operator license. General Class VE's would no longer be able to administer Novice examinations. A preparing VE is one who develops amateur operator tests, but does not necessarily give those examinations.
(4.) Amateurs who passed their Technician class requirements before March 21, 1987, would become a General class operator by attending a VE session and having the examiners sign off the FCC Form 6110 application. Girton suggested a fee of $1.00.
(5.) Applicants would only have to pass Element 3B (General written theory exam) to upgrade from Technician to the General Class.

Girton says he believes the prosigns are used by persons who are interested in sending traffic or contesting. "Most of the CQ traffic has been replaced by RTTY, packet or AMTOR digital communications." He also feels the 13 wpm code test is limiting amateur growth, the development of digital communications and privileges for those who could care less about Morse code.

■ We are seeing a lot of amateur press coverage of the upcoming **World Administrative Radio Conferences** to be held in 1992 in Spain ...and the following year in Switzerland. It is anticipated that the HF bands will come under particularly close scruitiny. Twenty years ago, the last WARC gave us the 12, 17 and 30 meter bands. We may not make out as well in 1992. The resolutions and recommendations of smaller Regional WARC's covering HF broadcasting, UHF Mobile and Orbital Satellite communications indicate that there, indeed, may be a cause for alarm. Canadian amateurs are setting up a fund to finance their Amateur delegates' travel and expenses while in Spain. The FCC is also in the process of establishing a new "Office of International Communications" to coordinate international policy.

■ **Herb Nelson, W9IGL,** President and Publisher of ***Radio Amateur Callbook, Inc.,*** has sold his firm to BPI Communications, Inc., of New York City. Nelson will remain as Publisher. Glenn Heffernan, BPI's Vice President, said the Callbook is "...a natural compliment to our publication, *World Radio TV Handbook.*" They also publish "Billboard", a magazine geared to the performing arts. The Callbook will remain at its present location and all Callbook employees will be retained. In addition to the Callbook, the firm offers the Gordon West Radio School license preparation materials and audio tapes. Their *Radio Publications, Inc.,* division markets other titles of particular interest to ham operators and shortwave listeners.

■ **If you hear "PA60" prefixes on the air** between now and the end of the month, they will be Dutch amateurs commemorating the 60th anniversary of the first Amateur Radio license issued in the Netherlands.

■ **Lloyd Colvin, W6KG, and Iris Colvin, W6QL,** have left on an around the world **YASME DX-pedition.** They departed October 30th and expect to return in April 1990 in time for the *Dayton HamVention.* The primary reason for buying the round-the-world tickets is that they are each permitted a free baggage allowance of two 70-pound pieces. They take a complete amateur radio station with them, including a tri-band beam and support. The Colvins hope to be on the air on all bands SSB and CW from: Niger, Burkimo Faso, Bahrain, New Zealand and Tahiti. They will stay in each country about three to four weeks. QSL cards, as always, go to the: YASME Foundation, P.O. Box 2025, Castro Valley, CA 94546.

■ **The FCC announced on October 31** that effective January 1, 1990, the maximum allowable reimbursement fee for an amateur operator license examination will be $4.96. This amount is based upon a 4.3% increase in the Dept. of Labor *Consumer Price Index.* VE's and VEC's may charge examinees for out-of-pocket expenses incurred in preparing, processing or administering examinations for the Technician and higher class licenses. No fee is allowed for the Novice Class operator license examination. The *W5YI-VEC Program* (and we assume the ARRL-VEC) will be charging $4.95 at all VEC examination sessions scheduled after January 1. The *W5YI -VEC Program* shares expense reimbursement with its VE teams. When ten or more applicants for upgrades are examined, the VE team retains $2.70 of the $4.95 as their share of expense reimbursement. (On nine or less: $1.95.) Extra Class level amateurs wishing further information on the *W5YI-VEC Program* should write for a free VE Manual. (Large 9"x12" self-addressed stamped with 90 cents postage appreciated.)

■ **"JARL News", the English language publication of the Japan Amateur Radio League** says the number of radio stations in Japan now exceeds 5,000,000 for the first time! (5,107,175 to be exact.) According to the MPT *(Ministry of Post and Telecommunications)* the number of Conventional Radio Stations (similar to our Citizen's Band Radio) is 2,390,000, that of Portable Radio Stations (Automobile Radio, MCA Radio, etc.) comes to 1,540,000 ...followed by 950,000 Amateur Radio stations. These three kinds of stations account for nearly 94% of the total transmitting stations operating in Japan. JARL also said their two volume amateur station directory listing all 950,000 Japanese ham stations will be completed next month.

■ **The CRRL Bulletin (Canadian Radio Relay League) and the Canadian Amateur Radio Magazine (Canadian Amateur Radio Federation)** mention their new Radio Communication Act which "received royal assent" (passed) on October 19th. Harmful interference

is defined for the first time as "...an adverse effect of electromagnetic energy from any emission, radiation or induction that:
(a.) ...endangers the use or function of a safety-related communication system, or:
(b.) ...significantly degrades, obstructs, or repeatedly interrupts the use or functioning of radio apparatus or radio sensitive equipment.
In addition, the new Act conveys power to the Minister of Communications to "...establish technical requirements and standards in relation to: (1.) radio apparatus, (2.) interference causing equipment, and: (3.) radio sensitive equipment or any class thereof.

Interference causing equipment means any device, machinery or equipment, other than radio apparatus, that causes - or is capable of causing - interference to radio communications. Radio sensitive equipment is defined as any device, machinery or equipment other than radio apparatus, the use or functioning of which can be adversely affected by radio communications emissions.

■ **About a year ago we reported on a massive FCC crackdown against satellite signal theft via modified Video-Cipher-II descramblers.** Raids were conducted in many cities ...including Las Vegas, NV. Now comes word that one of those arrested for allegedly selling satellite-TV pirating devices turns out to be a convicted cop killer who escaped from a Wisconsin federal prison in 1974! **Richard N. Nickl** was arrested by FBI agents on October 25th. He had been operating United Satellite of America which distributed descramblers with pirate chips illegaly installed. A Las Vegas federal grand jury indicted Nickl - under the name Michael Connors - on satellite-piracy charges July 19. Fingerprints proved his real identity.

■ The **Association of Clandestine Radio Enthusiasts** publishes an interesting newsletter called ***The Ace.*** The September issue tells how the FCC called upon several U.S. radio amateurs to help test new technology high-frequency radio-direction finding (RDF) equipment. It seems the Commission wanted to check out a portable "Interferometer RDF" from Zeta Laboratories of San Jose, CA. The Interferometer, which was originally built for the military, not only determines direction, but distance to the signal source as well. The single site system does this by comparing "single hop" signal elevation angles with the height of the ionosphere which is determined by timing an atmospheric sounder. The amateurs were selected for the test because targets unknown to the FCC were needed for the experiment. The trial also involved use of some government and foreign stations. Apparently the RDF equipment will be used for "pirate-chasing." The most popular pirate frequencies are said to be 6240 and 7415 kHz. *(ACE, PO Box 11201, Shawnee Mission, KS 66207-0201)*

■ **One of the editors of The ACE Newsletter is Havana Moon,** but no one seems to know who he is. He offers a computer on-line service devoted to the scanner and short-wave listening enthusiast. The HMLNO (Havana Moon Los Numeros Online) service seems to have a business address; 117 W. Harrison Bldg., 6th Floor, Suite H-319, Chicago, IL 60605.

■ **The publication also reported on the closing down of Radio Caroline,** the popular unlicensed English rock'n'roll radio station operating on 6215 kHz in international waters in the North Sea. Dutch, British, French and Belgian authorities boarded the radio ship *"Ross Revenge"* while Radio Carolina was on the air. Under maritime law, authorities do not normally have the right to board ships in international waters, but did so on a legal technicality and shut the station down. It seems the ship was not flying a flag and was therefore considered stateless.

■ **In our June 1st Report, we discussed perennial radio offender, Jerry Gastil, K6DYD (Extra Class)** of San Diego, CA, who pleaded guilty to jamming FBI frequencies. He was fined placed on three years supervised probation and ordered to perform five years community service. The FCC has now stripped Gastil of all his radio licenses. His amateur license has been suspended for nine months, his W6JAM club license is to be transfered to WB6SQZ for five years and his commercial SMR license transferred to his wife to permit his continuing business. Gastil's first class radiotelephone license is revoked, but he may reapply in one year. He must perform free mobile radio installation and service for the San Diego school bus system. Gastil was fined $50 in 1985 for operating an unidentified repeater station; $750 in 1986 for running an HF pirate broadcast station on 7434 kHz as *"Doctor Demento, Voice of the Pacific Northwest"* using the unauthorized call sign, KIKI.

■ **Famed Pitcairn Island ham, Tom Christian, VR6TC,** has been selected by the Seventh Day Adventist Church to attend a conference in Indianapolis, Indiana, next July. His expenses will be paid by the church, but he would like to bring his wife, Betty (VR6YL) and two of his four daughters, Sherileen and Darlene. A fund raising campaign to help bring Betty and the girls has been started by: Howard Phelps, 5580 Lerner Way, Sacramento, CA 95823. (Info from Bruce Frahm, K0BJ, of Colby, KS, who writes "...on our 1979 Yankee Trader circumnavigation, my XYL and I stayed at Tom and Betty's, with their four girls, for three days and I operated RTTY/CW from his shack as VR6BJ.")

■ **Errata:** In our last issue (Nov. 1 Report, page 2) we were mentioning that the ARRL wrote the regulations to enable the W1AW operator to be paid a salary. We think it would be more accurate to say that the FCC revised their regulations to meet the ARRL's requirements. Of course, only the FCC can write §Part 97 Rules.

AMATEUR RADIO IN WEST GERMANY

We asked one of our volunteer examiners, ***SSG Mike Warner NX7T/DA1YH,*** to tell us about amateur radio testing in West Germany. They have had a code-free VHF/UHF ham ticket for several years.

The examination for all West German amateur licenses is administered by two Deutsche Bundespost (their federal telecomunications agency) employees ...and one volunteer examiner holding the top *Class B* license. There are three amateur license classes: the code-free *Class C,* the *Class A* and the *Class B.* Amateur applicants must be 14 years of age or older.

The *Class A* license requires 30 characters (6 words) per minute Morse proficiency, 60 characters per minute (12 wpm) for the *Class B.* The three minute code test consists of one minute of random five character groups, one minute of plain text and one minute of normal amateur traffic. Examinees must not have more than three errors receiving and three errors sending with a hand key ...up to five receiving errors may be corrected. Applicants are allowed two attempts to pass the code exam at the same testing session. There is no telegraphy examination faster than 12 wpm in West Germany.

The essay type theory examination is more difficult than our Novice/Technician exams. Although the *exact* questions and answers are published, the written examination is *not* multiple choice. The answers must be written out and the examinee may get partial or full credit. The written examinations may not be retaken again for 60 days. Amateur licenses do not authorize air mobile operation. There is a testing fee (DM 40.00, re-tests are DM 20.00 - Mike did not say what the exchange rate was) to take amateur examinations. Once licensed, radioamateurs must pay a monthly spectrum use fee to install and operate an amateur station.

The written examination requires a 65% pass rate on the procedure and regulation questions, but the passing percentage varies on the technical questions. *Class C* requires 50% correct, *Class A:* 65% and the highest *Class B:* 75%. There is only one written examination and applicants qualify as having passed the C, A or B examinations based on the score of the technical questions. Applicants that score more than 50%, but less than 75% must be later reexamined to upgrade. The examinations are, of course, given in the German language.

The *Class A* license is somewhere between our Tech and General with 80m, 15m, 10m and all VHF/UHF privileges. The *Class C* is the code-free license which authorizes 2 meter and higher frequency all mode operation at 75 watts PEP. (There is no six meter or 220 MHz operation at all in Germany and their two meter band is confined to 144-146 MHz.) *Class B* operators are additionally authorized 40m, 30m, 20m, 17m and 12m.

As a general rule, *Class A* operators may radiate 150 watts, Class B: 750 watts PEP. The DARC (Deutsche Amateur Radio Club) is the interpreter of Amateur Regulations and they tend to be more strict than the government would be. Policing of the bands is done by the Government, there is no effort towards self-policing.

Warner/NX7T says the German regulations applying to TVI are very interesting ...and very effective. The Deutsche Bundespost will inspect a problem area at no charge where interference has been reported but only if the following conditions are met:

(1.) device being interfered with must be an approved device.

(2.) system must be hooked up to an approved outdoor or cable installation having no wide band amplifiers and no indoor antenna.

(3.) device must first be certified by a licensed TV repairman to be in good operational condition ...as must the antenna system.

If these conditions have not been met, the consumer must accept any interference and quiet hours are never assessed against amateurs witnout inspection by the Bundespost. Mike said the system works well. The consumer gets a safe, properly operating, well engineered device, the service technicians get business and the electronics industry benefits due to the increased sale of parts ...or a replacement unit -- if the consumer is to qualify for legal assistance. The amateur does not get blamed for faults in equipment that is not up to par.

ARRL COMPUTER CONFERENCE

The *Eighth Annual ARRL Computer Networking Conference* took place the weekend of October 7th, 1989 in Colorado Springs, Colorado at the US Air Force Academy. The conference was sponsored by Tucson Amateur Packet Radio (TAPR), Academy Amateur Radio Club, USAFA Cadet Radio Club, Rocky Mountain Packet Radio Association (RMPRA) and the ARRL. The event was organized by ***Andy Freeborn/N0CCZ,*** President of TAPR.

Most people thought the conference was the best one yet. In attendance were about 150 amateurs from across the country and the world. Amateurs from the Netherlands, Costa Rico, Italy, England, Australia, Sweden, and Mexico were present. This year's proceedings encompassed HF packet, Networking, Application & Users, High Speed Packet, Satellites, and other general subjects. Here are highlights of a few of the papers:

■ **HF Diversity - Steve Hall/WM6P:** By using multiple receivers, reception of packet is increased on HF by combining what both receivers receive.

■ **AMTEX - NAVTEX-like Dissemination Procedures for Amateur Radio - Paul Newland/AD7I:** AMTEX could provide better dissemination of bulletins in the amateur community by using AMTOR and this simple coding scheme.

■ **Packet Broadcast Protocol - Gordon Beattie/N2DSY:** A presentation on a potential packet broadcast method for use in packet radio.

■ **Routing, Oh Where is My International Routing - Chuck Hast/TI3DJT:** A presentation on the current packet network in Central America and some of the problems encountered to date in its construction.

■ **Design of a Next-Generation Packet Network - Bdale Garbee/N3EUA:** A look at technologies that have potential for impacting future packet networks. A preliminary proposal is made for an example network configuration in the Rocky Mountain Region.

■ **Application Software for Packet Radio - Robert Taylor/KA6NAN and Dewayne Hendricks/WA8DZP:** Discussion on the possibilities of applications for amateur packet radio. A Packet Chess program written for the MAC is used as an example.

■ **Protocol Level Eight -or- what about the Users ? - Lyle Johnson/WA7GXD:** Is packet to be useful to communicators, or will it remain in the domain of the techies? Discussion concerning future implementations of packet for the normal user.

■ **Implementation of a 1 MBPS Packet Data Link Using 10 GHz RF - Glenn Elmore/N6GN and Kevin Rowett/N6RCE:** Design and implementation of an amateur radio packet data link operating at one megabit/sec.

■ **ATS-3 Packet Experiments, The Potential Impact of Packet Radio upon Pacific Basin Communications - Gerald Knezek/KB5EWV and Greg Jones/WD5IVD:** A report on work being done at the University of North Texas on providing packet LAN and WAN communications in the Pacific Basin for providing low-cost data communications.

■ **Tucson Amateur Packet Radio packetRADIO Project - Greg Jones/WD5IVD and Pete Eaton/WB9FLW:** Review of the TAPR packetRADIO project to date and its design. (See Page 3 in this Report.)

■ **A Multi-Channel IBM PC Packet Interface - Henk Peek/PA0HZP:** Discussion on a universal medium speed packet interface for the IBM/PC ISA bus.

■ **Design and Implementation of an AppleTalk Local Area Network Bridge Using Packet Radio - R. Ramsey and W. Kinsner:** Design and implementation of a local area network bridge based on the link layer AX.25 packet radio protocol and the AppleTalk Personal Network on the Macintosh Computer.

Kantronics showed its new DVR 2-2 high-speed 9600-baud packet radio and DE 56 Data Engine. As has been true in past years, the conference proceedings will be available from ARRL.

ARRL SEEKS NJ SCANNER LAW REVERSAL

The following message from ***Steve Mendelsohn, WA2DHF,*** ARRL Hudson Div. Director has been making its way through the U.S. packet networks. It concerns a New Jersey law which makes it illegal to have certain scanners or radio receivers in your automobile.

"The ARRL will actively seek alternative relief at the Federal level from state and local so-called scanner laws. In its filing on the §Part 97 Amateur Radio Rules rewrite, the League asked the FCC to adopt a rule which would read:

'Notwithstanding any state of local law to the contrary, and except as may be specifically prohibited by the laws of the United States, any station apparatus may be used in an amateur station, fixed, mobile or portable, whether or not such apparatus is incidentally capable of operation on frequencies assigned to another service.'

The proposed rule, dealing with the possession of radio receivers capable of reception of Police or other Public Safety communications, would restate the Federal Government's pre-emption where local laws are in conflict with Federal law.

In New Jersey several amateurs have had their equipment seized because it is capable of receiving

local government frequencies in addition to amateur radio frequencies. The New Jersey law states that any person who '...installs or has in any automobile, a short wave radio receiver operative on frequencies assigned by the FCC for fire, police, municipal or other governmental uses, is guilty of a misdemeanor, unless a permit therefore has first been obtained from the chief of the county police, or from the chief of the police of the municipality, wherein such person resides.

Taken at its broadest term this law could mean that if you have *any* amateur radio equipment in your car it could be taken to be illegal ...because New Jersey RACES is a governmental function and the law specifically bans the use of a receiver for such frequencies. This would make HF, VHF and UHF receivers illegal as RACES uses all of those bands.

The *Electronic Communications Privacy Act of 1986* prohibits intentional interception of wire, oral or electronic communication, but specifically exempts, among other things, governmental, law enforcement, civil defense, private land mobile or public safety communications systems, including police and fire, readily accessible to the general public.

The phrase 'readily accessible to the general public' refers to the presence or absence of scrambling or encryption devices. routine police or fire communications are not scrambled and are readily heard on amateur receivers with extended coverage. This puts the Federal government and the state of New Jersey in opposition. The regulation of radio receivers and which frequencies may be included in receivers is a FCC, not state, function. Therefore the League will actively seek relief at the Federal level."

The FCC did not adopt the proposed §Part 97 wording suggested by the League. On October 21, the ARRL Executive Committee directed Counsel ***Chris Imlay, N3AKD,*** to file a request with the FCC for a declaratory ruling preempting state statutes and local ordinances that restrict the possession or operation by licensed amateurs of Amateur Radio equipment having incidental capability to receive frequencies outside the amateur bands.

The Executive Committee also authorized a petition to be filed seeking revisions to §Part 97 that were sought by the League, but not incorporated by the FCC in its recent proceeding to reorganize the Amateur Service Rules.

"MASTER OF COMMUNICATIONS" DENIED!

The *Amateur Extra Class* license has been with us since 1952 and it appears it will be with us for some time to come. On December 27, 1988, ***Keith Griener, AK0Q,*** of Des Moines, IA, filed a petition seeking a change in the name of the Amateur Extra Class license to a title which may be more widely recognized as having the highest rank among all amateur radio licenses. He proposed ***"Master of Communications."***

Griener said that the word *"Extra"* is a major unknown while the other license classes have titles which clearly indicate their status. He requested the name *"Amateur Extra"* be changed to something which communicates more of the distinction and professionalism achieved and expected from holders of the class.

He argued that the word *"Master"* is defined in the dictionary as *"...a person very skilled and able in some work, profession, science, etc, 'expert; specifically a skilled workman or craftsman qualified to follow his trade independently..."*

Apparently the FCC thought the petition had some merit since it was assigned a rule making file number (RM-6648) and circulated for public comment. The FCC received only 15 comments - nine generally supportive; six opposed.

On October 31, the FCC denied and dismissed Griener's petition stating "The Amateur Extra Class has stood for the highest level of amateur operator license for nearly 38 years. Approximately ten percent of the 460,000 amateur operators licensed by the Commission have reached this pinnacle."

The FCC contends that it would be costly for the FCC, the VE examining system and assumably license preparation publishers to replace forms and publications made obsolete by the proposal when "...the public benefit of the proposed name change is not clear. ...the proposal makes no changes in the operating privileges nor would it affect the day-to-day operating practices of the amateur community."

"In view of the clear cost of undertaking this rule change and the questionable benefits involved, we conclude that a proposal changing the name of the Amateur Extra Class operator license is not in the public interest and does not warrant consideration by the Commission at this time." *(FCC Order:10/20)*